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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/934,248	08/21/2001	Byung J. Choi	5119-08401	6502

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EXAMINER

VARGOT, MATHIEU D

ART UNIT PAPER NUMBER

1732

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/934,248

Applicant(s)

CHOI ET AL.

Examiner

Mathieu D. Vargot

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16, 31-49 and 212-227 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16, 31-49 and 212-227 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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1.Claim 226 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 226, line 3, after "retain the", --object—should apparently be added.

2.The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 7, 11, 13-16, 31-39, 41, 48, 49, 212-217, 219 and 224-226 are rejected under 35 U.S.C. 102(b) as being anticipated by Scire et al (see Figs. 1-4; col. 1, line 50 through col. 2, line 10; col. 2, lines 61-64; col. 7, lines 16-25).

The applied reference (see Fig. 2) discloses the instant apparatus for positioning an object in a plane with first and second sets of flexure linkages (14-17 and 41-44) coupled to a holding member (40), with the sets of flexure linkages comprising a plurality of elongated members configured to constrain movement of the holding member to a substantially linear motion along one axis. It is submitted that the flexible joints shown in Scire et al contain no frictional contact as set forth in instant claims 7, 41 and 219. Also, the holding member is inherently capable of functioning as set forth in instant claims 13, 14, 48, 49, 224 and 225. Ie, it would inherently be used as a wafer chuck or for holding a semiconductor substrate. Concerning instant claim 226, see col. 7, line 24. It is further submitted inherent that the flexible joints coupling the elongated members together allow some degree of rotation of the elongated members as required

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by instant claims 5, 39 and 217. Concerning this, see the discussion of the background art at col. 1, lines 52-67, wherein the flexible linkages of the prior art have rotational motion. Even constrained in the manner taught by Scire et al, it is believed that the elongated members would have some degree of rotational motion.

3.The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6, 8-10, 12, 40, 42-47, 218 and 220-223 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scire et al.

Scire et al discloses the basic claimed apparatus as set forth in paragraph 2, supra, the applied reference essentially lacking a clear showing of the exact angle with which the joints are rotated, that the joints are rolling contact joints and that the motor is a magnetic linear servomotor. It is submitted that these aspects are all well within the skill level of the art and would have been obvious modifications to the apparatus disclosed in Scire et al. While the rotation to some extent is submitted as inherent in Scire et al, it is submitted that the exact angle to which the joints are rotated would have been within the skill of the art and obvious dependent on the extent desired. Rolling contact joints are submitted to be well known in the art and modification of the flexure joints of Scire et al to such would have been obvious dependent on amount of freedom desired to be imparted to the motion. Concerning the motor, it is submitted that the instant magnetic

linear servomotor is well known and would have been an obvious selection over the motors taught in Scire et al –see col. 7, lines 15-20.

4.Claim 227 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scire et al in view of Mori et al (1-4 in Fig. 1) or Mori et al in view of Scire et al.

Scire et al discloses the basic claimed substrate positioning device as already set forth, the reference essentially lacking the aspect of a patterning device. Mori et al discloses this in a device employing a movable stage. One of ordinary skill in the art would have clearly modified the device of the primary reference with a patterning device as shown in Mori et al dependent on the exact purpose to which the positioning apparatus is to be used. Likewise, it would have been obvious to have utilized the positioning device as shown in Scire et al in the patterning device of Mori et al to facilitate the desired exposure.

5.Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

The 1.31 affidavit has been noted and the reference to Amatucci et al has been withdrawn. However, as clearly disclosed in Scire et al, the instant positioning apparatus is already known in the art.

6.Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mathieu D. Vargot whose telephone number is 571 272-1211. The examiner can normally be reached on Mon-Fri from 9 to 6.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni, can be reached on 571 272-1196. The fax phone

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number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

M. Vargot
July 9, 2005


Mathieu D. Vargot
Primary Examiner
Art Unit 1732

7/9/05